

CLAIMS

What is claimed is:

1. A device for dispensing medicament from a medicament canister, the device comprising:

a housing configured for selectively receiving the canister; and

a carriage movably connected to the housing and movable between a first, open position wherein the medicament canister can be placed on or removed from the carriage, and a second, closed position wherein the canister is held for actuation.

2. The device according to claim 1, wherein the carriage is slidably movable between the first position and the second position.

3. The device according to claim 2, wherein the carriage comprises a plurality of teeth and the device further comprising a gear disposed adjacent the housing disposed for engaging the teeth on the carriage.

4. The device according to claim 3, further comprising a release button for selectively preventing rotation of the gear.

5. The device according to claim 4, further comprising a biasing element attached to the release button and biasing the release button into a closed position.

6. The device according to claim 1, further comprising a release button for selectively holding the carriage in the second, closed position.

7. The device according to claim 1, wherein the device further comprises an actuator for engaging the medicament canister to dispense medicament in response to airflow through the housing.

8. The device according to claim 7, wherein the actuator comprises a sear vane for movement in response to airflow, and a plunger, responsive to movement by the sear vane, for engaging the medicament canister.

9. The device according to claim 8, further comprising a rotary sear and a lever arm which functionally connect the sear vane to the plunger.

10. The device according to claim 9, further comprising a biasing element attached to the lever arm for moving the lever arm and creating forced engagement between the plunger and the canister.

11. The device according to claim 9, wherein the plunger is slidable along the lever arm.

12. The device according to claim 8, further comprising a vane lock for selectively preventing movement of the sear vane.

13. The device according to claim 7, further comprising a pushlink disposed in communication with the actuator for arming the actuator.

14. The device according to claim 13, wherein at least one of the pushlink and the actuator has a slot configured for allowing one of the pushlink and actuator to move linearly while the other moves arcuately.

15. The device according to claim 13, further comprising at least one seal disposed about the pushlink.

16. The device according to claim 1, wherein the carriage

is configured for receiving an actuator of a metered dose inhaler.

17. The device according to claim 16, wherein the carriage is configured for nesting reception of an actuator having a horizontal cross-section which is circular or triobular.

18. The device according to claim 1, wherein the carriage comprises a channel configured for receiving a strap cap of a metered dose inhaler.

19. The device according to claim 1, wherein the carriage comprises at least one rib configured for engaging an actuator of a metered dose inhaler.

20. The device according to claim 1, further comprising at least one seal disposed adjacent the carriage when the carriage is in the first, closed position.

21. The device according to claim 20, wherein the at least one seal comprises a gasket having a generally circular opening.

22. The device according to claim 20, wherein the at least one seal comprises a gasket having a generally triobular opening.

23. The device according to claim 20, wherein the at least one seal comprises two seals having different shaped openings.

24. A inhalation actuated device for dispensing medicament from a metered dose inhaler, the metered dose inhaler comprising an actuator and a medicament canister disposed in the actuator, the device comprising:

a housing having an opening for receiving the metered dose inhaler; and

a slidable release disposed adjacent the housing for selectively allowing and preventing movement of the metered dose inhaler into and out of the housing.

25. The inhalation actuated device according to claim 24, wherein the release comprises a release button.

26. The inhalation actuated device according to claim 24, wherein the release comprises a carriage configured for carrying the actuator and canister of the metered dose inhaler.

27. The inhalation actuated device according to claim 26, wherein the carriage comprises a plurality of ribs for engaging a metered dose inhaler.

28. The inhalation actuated device according to claim 27, wherein the carriage comprises an opening for receiving a strap cap of a metered dose inhaler.

29. The inhalation actuated device according to claim 24, wherein the release comprises a slidable carriage, a gear which engages the slidable carriage, and a release button which selectively prevents rotation of the gear.

30. The inhalation actuated device according to claim 29, wherein the carriage comprises a plurality of teeth disposed for engaging the gear.

31. The inhalation actuated device according to claim 29, wherein the gear comprises a reduction gear.

32. The inhalation actuated device according to claim 24, further comprising an actuator for selectively actuating the canister of the metered dose inhaler to dispense medicament.

33. The inhalation actuated device according to claim 32, further comprising a lock for preventing actuation of the actuator.

34. The inhalation actuated device according to claim 32, further comprising a pushlink for selectively arming the actuator.

35. The inhalation actuated device according to claim 24, comprising at least one seal for limiting direction of airflow within the housing.

36. The inhalation actuated device according to claim 24, wherein the at least one seal is disposed in the housing such that the metered dose inhaler extends through said seal.

37. The inhalation actuated device according to claim 36, wherein the at least one seal comprises a pair of seals having different shaped openings disposed in the housing to engage the metered dose inhaler.

38. The inhalation actuated device according to claim 36, wherein the device comprises a pushlink and wherein the at least one seal is disposed about the pushlink.

39. An inhalation actuated device for actuating a metered dose inhaler, the device comprising:

a housing having an opening for receiving a metered dose inhaler;

an actuator for selectively actuating a metered dose inhaler; and

a lock for selectively preventing actuation of the actuator.

40. The inhalation actuated device according to claim 39, wherein the actuator comprises a vane and wherein the lock comprises a vane lock for selectively preventing movement of the vane.

41. The inhalation actuated device according to claim 39, wherein the lock extends through the housing.

42. The inhalation actuated device according to claim 39, further comprising a carriage configured for holding a metered dose inhaler.

43. The inhalation actuated device according to claim 42, wherein the carriage is slidable between a first, open position wherein the metered dose inhaler can be loaded into or removed from the carriage, and a second, closed position, wherein the metered dose inhaler is held in the housing.

44. The inhalation actuated device according to claim 43, wherein the carriage comprises a plurality of teeth and wherein the device further comprises a gear for engaging the teeth and selectively preventing movement of the carriage.

45. The inhalation actuated device according to claim 43, further comprising a release button for selectively preventing removal of the metered dose inhaler.

46. The inhalation actuated device according to claim 39, further comprising at least one seal disposed in the housing for engaging the actuator of a metered dose inhaler.

47. The inhalation actuated device according to claim 47, wherein the at least one seal comprises a pair of seals disposed in alignment for engaging the metered dose inhaler.

48. The inhalation actuated device according to claim 48,
wherein the seals have different opening configurations.